

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1-5. (Canceled)

6. (Currently Amended) ~~The~~ An exposure apparatus ~~according to claim 5, which~~
exposes a substrate by radiating an exposure light beam onto the substrate through a liquid,
the exposure apparatus comprising:

a projection optical system which projects an image of a pattern onto the
substrate;

a substrate table which holds the substrate;

a member provided exchangeably on the substrate table, at least a part of a
surface of the member being liquid-repellent; and

an attaching/detaching mechanism which attaches/detaches the member with
respect to the substrate table,

wherein the member has a flat portion which is substantially flush with a
surface of the substrate held by the substrate table, the flat portion being arranged around the
substrate, and

wherein the attaching/detaching mechanism is capable of detaching the
member from the substrate table together with the substrate.

7-18. (Canceled)

19. (Currently Amended) ~~The~~ An exposure apparatus ~~according to claim~~
~~17,~~ which exposes a substrate by radiating an exposure light beam onto the substrate through a
liquid, the exposure apparatus comprising:

a projection optical system which projects an image of a pattern onto the
substrate; and

a movable stage which is movable relative to the projection optical system,
wherein, a liquid-repellent member, at least a part of which is liquid-repellent,
is provided on the movable stage, and the liquid-repellent member is exchangeable,

wherein the movable stage is a substrate stage which holds the substrate, and
the substrate stage includes a holding portion which holds the member, and an attracting unit
which detachably attaches the member to the holding portion,

wherein the liquid-repellent member is a stepped member having a first
surface which is opposed to a back surface of the substrate and a second surface which
extends to outside of the substrate along a surface of the substrate, and

wherein the exposure apparatus further comprising comprises an outer member
which has a third surface extending to outside of the liquid-repellent member along the
surface of the substrate and which is engageable with the liquid-repellent member, wherein at
least the third surface is liquid-repellent.

20. (Currently Amended) ~~The~~ An exposure apparatus ~~according to claim 17,~~
which exposes a substrate by radiating an exposure light beam onto the substrate through a
liquid, the exposure apparatus comprising:

a projection optical system which projects an image of a pattern onto the
substrate; and

a movable stage which is movable relative to the projection optical system,
wherein, a liquid-repellent member, at least a part of which is liquid-repellent,
is provided on the movable stage, and the liquid-repellent member is exchangeable,

wherein the movable stage is a substrate stage which holds the substrate, and
the substrate stage includes a holding portion which holds the member, and an attracting unit
which detachably attaches the member to the holding portion,

wherein the liquid-repellent member is a stepped member having a first surface which is opposed to a back surface of the substrate and a second surface which extends to outside of the substrate along a surface of the substrate, and

wherein the exposure apparatus further ~~comprising~~ comprises a lifting unit which moves the liquid-repellent member upwardly and downwardly with respect to the holding ~~section~~-portion

21. (Currently Amended) The exposure apparatus according to claim 20, wherein the lifting unit moves the liquid-repellent member upwardly from the holding ~~section~~-portion in a state in which the liquid-repellent member supports the substrate.

22. (Canceled)

23. (Currently Amended) ~~The~~ An exposure apparatus according to claim 22, which exposes a substrate by radiating an exposure light beam onto the substrate through a liquid, the exposure apparatus comprising:

a projection optical system which projects an image of a pattern onto the substrate; and

a movable stage which is movable relative to the projection optical system, wherein, a liquid-repellent member, at least a part of which is liquid-repellent, is provided on the movable stage, and the liquid-repellent member is exchangeable,

wherein the movable stage is a substrate stage which holds the substrate, and the substrate stage includes a holding portion which holds the member, and an attracting unit which detachably attaches the member to the holding portion,

wherein the liquid-repellent member is a substrate holder having a support portion which supports an edge portion of a back surface of the substrate, a flat surface which extends to outside of the substrate along a surface of the substrate, and a side wall which is connected to the flat surface and which is higher than the flat surface, and

wherein the exposure apparatus further comprising comprises a substrate table
on which a substrate holder is placed, wherein the substrate holder and the substrate table
have flow passages to make communication with each other respectively.

24. (Currently Amended) The exposure apparatus according to ~~claim 12,~~claim 23,
wherein the part of the member, which is liquid-repellent, is composed of fluoride.

25. (Currently Amended) ~~The~~ An exposure apparatus ~~according to claim 12,~~
which exposes a substrate by radiating an exposure light beam onto the substrate through a
liquid, the exposure apparatus comprising:

a projection optical system which projects an image of a pattern onto the
substrate; and

a movable stage which is movable relative to the projection optical system,
wherein, a liquid-repellent member, at least a part of which is liquid-repellent,
is provided on the movable stage, and the liquid-repellent member is exchangeable, and

wherein the liquid-repellent member includes at least a part of a reference
member and a part of an optical sensor.

26. (Original) The exposure apparatus according to claim 25, wherein at least a
part of a light irradiated surface of each of the reference member and the optical sensor is
liquid-repellent.

27. (Currently Amended) ~~The~~ An exposure apparatus ~~according to claim~~
~~12,~~which exposes a substrate by radiating an exposure light beam onto the substrate through a
liquid, the exposure apparatus comprising:

a projection optical system which projects an image of a pattern onto the
substrate; and

a movable stage which is movable relative to the projection optical system,

wherein, a liquid-repellent member, at least a part of which is liquid-repellent, is provided on the movable stage, and the liquid-repellent member is exchangeable, and

wherein the part of the liquid-repellent member, which is liquid-repellent, has a light irradiated surface; an adhesive layer is formed on the light irradiated surface; and an amorphous fluororesin layer is formed on a surface of the adhesive layer.

28. (Original) The exposure apparatus according to claim 27, wherein the adhesive layer is formed of at least one particulate layer selected from the group consisting of silicon dioxide, magnesium fluoride, and calcium fluoride.

29. (Original) The exposure apparatus according to claim 27, wherein the adhesive layer is a layer which is obtained by etching the light irradiated surface with hydrogen fluoride.

30. (Currently Amended) The exposure apparatus according to ~~claim 12,~~ claim 25, wherein the substrate is a circular substrate having no cutout, and a surface and a side portion of the substrate are coated with a photosensitive material.

31. (Currently Amended) ~~The~~ An exposure apparatus ~~according to claim 12,~~ which exposes a substrate by radiating an exposure light beam onto the substrate through a liquid, the exposure apparatus comprising:

a projection optical system which projects an image of a pattern onto the substrate; and

a movable stage which is movable relative to the projection optical system,

wherein, a liquid-repellent member, at least a part of which is liquid-repellent, is provided on the movable stage, and the liquid-repellent member is exchangeable, and

wherein an exchange timing for the member is determined on the basis of decrease in contact angle of the liquid at the liquid-repellent part of the member.

32. (Original) The exposure apparatus according to claim 31, wherein the member is exchanged when the contact angle is decreased to be not more than 100°.

33. (Original) The exposure apparatus according to claim 31, wherein the member is exchanged when the contact angle is decreased by not less than 10° as compared with an initial state.

34-37. (Canceled)

38. (Currently Amended) An exposure method for performing liquid immersion exposure for a substrate by radiating an exposure light beam onto the substrate through a liquid, the exposure method comprising:

supplying the liquid to at least a part of a surface of the substrate; and

performing the liquid immersion exposure for the substrate by radiating the exposure light beam onto the substrate through the liquid, wherein:

a part of the exposure apparatus, which is different from the substrate for which the liquid is supplied, is liquid-repellent, and the liquid-repellent part of the exposure apparatus is exchanged depending on deterioration of liquid repellence ~~thereof~~thereof, and
the deterioration of the liquid repellence is judged depending on a totalized amount of radiation of ultraviolet light.

39. (Original) The exposure method according to claim 38, wherein the part of the exposure apparatus is a part of a substrate stage or a part of a measuring stage.

40. (Original) The exposure method according to claim 39, wherein the part of the substrate stage is exchanged together with the substrate.

41-59. (Canceled)

60. (Currently Amended) ~~The~~An exposure apparatus ~~according to claim 1, which~~
exposes a substrate by radiating an exposure light beam onto the substrate through a liquid,
the exposure apparatus comprising:

a projection optical system which projects an image of a pattern onto the substrate; and

a substrate table which holds the substrate,

wherein a member, at least a part of a surface of which is liquid-repellent, is provided exchangeably on the substrate table, and

wherein the member includes a reference member having an irradiated surface, at least a part of which is liquid-repellent.

61. (Previously Presented) The exposure apparatus according to claim 60, wherein the member is exchanged depending on deterioration of liquid repellence thereof.

62. (Previously Presented) The exposure apparatus according to claim 60, wherein the member has a flat portion which is substantially flush with a surface of the substrate held by the substrate table.

63. (Previously Presented) The exposure apparatus according to claim 60, wherein the liquid-repellent member further includes at least a part of an optical sensor.

64. (Previously Presented) The exposure apparatus according to claim 63, wherein at least a part of a light irradiated surface of the optical sensor is liquid-repellent.

65. (Previously Presented) The exposure apparatus according to claim 63, wherein the optical sensor is an illuminance sensor.

66. (Previously Presented) The exposure apparatus according to claim 65, wherein the illuminance sensor measures a radiation amount of the exposure light beam.

67. (Previously Presented) The exposure apparatus according to claim 63, wherein the optical sensor is a spatial image-measuring sensor.

68. (Previously Presented) The exposure apparatus according to claim 63, wherein the optical sensor is a wavefront aberration-measuring sensor.

69. (Previously Presented) The exposure apparatus according to claim 60, wherein the substrate table is movable with respect to the projection optical system.

70. (Previously Presented) The exposure apparatus according to claim 60, wherein at least the liquid-repellent part of the reference member is formed of polytetrafluoroethylene.

71. (Previously Presented) The exposure apparatus according to claim 60, wherein the member includes a surface member having a flat portion which is substantially flush with a surface of the substrate held by the substrate table, and the surface member is detachable independently from the reference member.

72-80. (Canceled)

81. (Currently Amended) ~~The~~ An exposure apparatus ~~according to claim 12,~~
which exposes a substrate by radiating an exposure light beam onto the substrate through a
liquid, the exposure apparatus comprising:

a projection optical system which projects an image of a pattern onto the
substrate; and

a movable stage which is movable relative to the projection optical system,
wherein, a liquid-repellent member, at least a part of which is liquid-repellent,
is provided on the movable stage, and the liquid-repellent member is exchangeable, and

wherein the liquid-repellent member includes a reference member having an irradiated surface, at least a part of which is liquid-repellent.

82. (Previously Presented) The exposure apparatus according to claim 81, wherein the movable stage has at least one of a measuring stage and a substrate stage which holds the substrate.

83. (Previously Presented) The exposure apparatus according to claim 81, wherein at least the liquid-repellent part of the reference member is formed of polytetrafluoroethylene.

84. (Previously Presented) The exposure apparatus according to claim 81, wherein the liquid-repellent member includes a surface member having a flat portion which is substantially flush with a surface of the reference member, and the surface member is detachable independently from the reference member.

85-93. (Canceled)

94. (Previously Presented) The exposure method according to claim 38, wherein an exchange timing for the liquid-repellent part is determined on the basis of a decrease in a contact angle of the liquid at the liquid repellent part.

95. (Previously Presented) The exposure method according to claim 94, wherein the member is exchanged when the contact angle is decreased to be not more than 100 degrees.

96. (Previously Presented) The exposure method according to claim 95, wherein the member is exchanged when the contact angle is decreased by not less than 10 degrees as compared with an initial state.

97-98. (Canceled)